

Appl. No. : 10/664,699  
Filed : September 18, 2003

### AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims.

1. (Currently Amended) A water heating apparatus for use with a wash basin on an aircraft, the apparatus comprising:

a tube made of good heat conductive material, said tube comprising a plurality of coils with each coil engaging or being close to an adjacent coil;

an electric heater extending along a substantial length of said tube in good heat conductive relation with the tube, said heater being positioned exterior to said tube such that deposits do not form on said heater, said heater comprising coils with each heater coil being adjacent a pair of adjacent tube coils but not encircling an axis of said tube; and

said substantial length of said tube defining a volume of less than that required to contain approximately 14 ounces of water such that a user on the aircraft can obtain a supply of heated water having a volume of less than approximately 14 ounces before the water heater begins heating a new supply of heated water.

2. (Original) The apparatus of Claim 1, wherein the heater is brazed to the tube or joined to the tube with a heat conductive epoxy.

3. (Cancelled)

4. (Previously Presented) The apparatus of Claim 1, wherein said tube has a circular exterior cross-section such that said sections create a recess between said sections, and said heater is positioned in said recess.

5. (Cancelled)

6. (Previously Presented) The apparatus of Claim 1, wherein the heater coils are on the outside of the tube coils.

7. (Previously Presented) The apparatus of Claim 1, wherein the heater coils are on the inside of the tube coils.

8. (Previously Presented) The apparatus of Claim 1, wherein the tube and the heater define a tubular bundle of coils.

9. (Original) The apparatus of Claim 1, wherein said tube and said heater are each formed with a plurality of coils which are sufficiently large to extend around the exterior of a lower portion of a wash basin.

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10. (Previously Presented) The apparatus of Claim 9, including the wash basin, wherein the wash basin is sized and configured for placement in the aircraft.

11. (Previously Presented) The apparatus of Claim 1, wherein said heater configured to supply sufficient heat about 60° F to about 115 ° F in about three minutes.

12. (Original) The apparatus of Claim 11, wherein said tube has an outer diameter of about 3/4 of an inch and a length of about 74 inches.

13. (Original) The apparatus of Claim 12, wherein said tube is made of copper or stainless steel.

14. (Currently Amended) A method of heating small volumes of water for intermittent usage, ~~such as for an aircraft wash basin~~ in a wash basin on an aircraft, said method comprising:

providing a tube to be connected to a water outlet, said tube being made of good heat conductive material;

providing an electric heater in good heat conductive relation with the tube, said tube and said electric heater being in contact over a length that defines a volume of less than that required to contain approximately 14 ounces of water such that a user on the aircraft can obtain a supply of heated water having a volume of less than approximately 14 ounces before the water heater begins heating a new supply of heated water.

15. (Original) The method of Claim 14 comprising:

providing said tube and said heater with coils, with said heater coils being in good heat conductive relation with adjacent tube coils.

16. (Previously Presented) The method of Claim 15 comprising:

applying electrical energy to the heater to heat less than about 14 ounces of water in said tube to at least about 115° F in no more than about three minutes.

17. (Previously Presented) The apparatus of Claim 1, wherein said coil has an inlet and an outlet and said outlet is in fluid communication with said aircraft wash basin.

18. (Previously Presented) The method of Claim 14, wherein said water outlet empties into said aircraft wash basin.

19. (New) An aircraft sink water heater comprising a water tube, the water tube comprising an inlet and an outlet, the water tube comprising a spiral configuration to define a series of water tube coils, an electric heater comprising a spiral configuration to define a series of

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electric heater coils, the electric heater coils and the water tube coils having a common axis of curvature and each of the series of electric heater coils being in intimate relationship with only two adjacent coils of the water tube coils.

20. (New) The aircraft sink water heater of Claim 19, wherein the electric heater coils are positioned solely to the outside of the water tube coils.

21. (New) The aircraft sink water heater of Claim 19, wherein the electric heater coils are positioned solely to the inside of the water tube coils.

22. (New) The aircraft sink water heater of Claim 19, wherein the electric heater extends along substantially the entire length of the series of water tube coils.

23. (New) The aircraft sink water heater of Claim 19, wherein the water tube is formed of a potable water compatible material.

24. (New) The aircraft sink water heater of Claim 19, wherein the electric heater is insulated with a lightweight insulating material.

25. (New) The aircraft sink water heater of Claim 19 further comprising a temperature responsive switch positioned within the water tube coils, the temperature responsive switch being in electrical communication with the electric heater.